

## IN THE CLAIMS:

### Complete Claims Listing:

1. (Currently Amended) A low drop-out DC voltage regulator for regulating a voltage from a DC power supply ( $V_{\text{supply}}$ ) applied to a load (3) at an output of the regulator and comprising;

a pass device (~~T7~~) for controlling flow of current from said power supply to said load so as to control the output voltage ( $V_{\text{out}}$ ) at said regulator output; [[,]] and

a feedback loop for controlling said pass device (~~T7~~), said feedback loop comprising;

a resistive feedback path (5) and a capacitive feedback path that includes a feedback capacitive element (6) in series; [[,]] and

comparator means responsive to signals from said feedback paths for applying to said pass device (~~T7~~) an error signal that is a function of the value of said output voltage ( ~~$V_{\text{out}}$~~ ) relative to a nominal value so as to control said output voltage ( $V_{\text{out}}$ ), characterised in that said comparator means comprises feedback current producing means (~~8-10~~) by maintaining a common point (7) of said resistive feedback path (5) and said capacitive feedback path (6) at a reference voltage ( $V_{\text{ref}}$ ) so as to produce a feedback current flowing in said resistive feedback path (5) and in said capacitive feedback path (6) in parallel between said regulator output and said common point (7), and current comparison means (10, 11, 15) responsive to relative values of said feedback current and of a reference current ( $V_{\text{ref}}/R1$ ) for producing said error signal.

2. (Currently Amended) A low drop-out DC voltage regulator as claimed in claim 1, wherein said feedback capacitive element (6) in series in said capacitive feedback path forms a dominant pole in said feedback loop.
3. (Currently Amended) A low drop-out DC voltage regulator as claimed in claim 1 or 2, wherein said resistive feedback path includes a feedback resistive element (5) in series. [[,]]

4. (Currently Amended) A low drop-out DC voltage regulator as claimed in ~~any preceding~~ claim 1, wherein said feedback current producing means (8-10) comprises:

current mirror means including a first current conducting element (9) presenting a first conductive path to said feedback current from said common point (7) and a second current conducting element (10) presenting a second conductive path for conducting a current that is substantially equal to said feedback current in said first conductive path; [[,]] and

a voltage amplifier (8) whose output voltage is responsive to a difference in voltage between said reference voltage ( $V_{ref}$ ) and said common point (7) for controlling said feedback current flowing in said first current conducting element to maintain said common point (7) at said reference voltage ( $V_{ref}$ ).

5. (Currently Amended) A low drop-out DC voltage regulator as claimed in claim 4, wherein said current comparison means (10, 11, 15) includes a source (14) of said reference current ( $V_{ref}/R1$ ) connected in series with said second conductive path, said comparator means including control means (2) responsive to a voltage at a connection point (12) between said second conductive path and said current source for controlling a voltage applied to control said pass device.
6. (Currently Amended) A low drop-out DC voltage regulator as claimed in ~~any preceding~~ claim 1, wherein said reference current ( ~~$V_{ref}/R1$~~ ) is a function of said reference voltage ( $V_{ref}$ ).
7. (New) A low drop-out DC voltage regulator for regulating a voltage from a DC power supply applied to a load at an output of the regulator and comprising:

a pass device for controlling flow of current from said power supply to said load so as to control the output voltage at said regulator output; and

a feedback loop for controlling said pass device, said feedback loop comprising:

a resistive feedback path and a capacitive feedback path that includes a feedback capacitive element in series; and

a comparator circuit responsive to signals from said feedback paths for applying to said pass device an error signal that is a function of the value of said output voltage relative to a nominal value so as to control said output voltage, characterised in that said comparator circuit comprises a feedback current circuit producing by maintaining a common point of said resistive feedback path and said capacitive feedback path at a reference voltage so as to produce a feedback current flowing in said resistive feedback path and in said capacitive feedback path in parallel between said regulator output and said common point, and current comparison circuit responsive to relative values of said feedback current and of a reference current for producing said error signal.

8. (New) A low drop-out DC voltage regulator as claimed in claim 7, wherein said feedback capacitive element in series in said capacitive feedback path forms a dominant pole in said feedback loop.
9. (New) A low drop-out DC voltage regulator as claimed in claim 7, wherein said resistive feedback path includes a feedback resistive element in series.
10. (New) A low drop-out DC voltage regulator as claimed in claim 7, wherein said feedback current producing circuit comprises:

a current mirror including a first current conducting element presenting a first conductive path to said feedback current from said common point and a second current conducting element presenting a second conductive path for conducting a current that is substantially equal to said feedback current in said first conductive path; and

a voltage amplifier whose output voltage is responsive to a difference in voltage between said reference voltage and said common point for controlling said feedback current flowing in said first current conducting element to maintain said common point at said reference voltage.

11. (New) A low drop-out DC voltage regulator as claimed in claim 10, wherein said current comparison circuit includes a source of said reference current connected in series with said second conductive path, said comparator circuit including a control circuit responsive to a

voltage at a connection point between said second conductive path and said current source for controlling a voltage applied to control said pass device.

12. (New) A low drop-out DC voltage regulator as claimed in claim 7, wherein said reference current is a function of said reference voltage.